

Service Area Plan

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Background Information

Service Area Description

This service area implements the Virginia Mineral Mine Safety Act and Virginia's mineral mining reclamation laws. The laws and regulations protect workers on mineral mines and other public affected by the operations from risks due to unsafe conditions and unsafe acts on the operations, and protect the public safety and health from the possible harmful environmental effects of mineral mining operations. Products and services include:

- Customer service, such as training, technical assistance, and risk assessment.
- Inspection and enforcement of the mine safety and reclamation laws and regulations.
- Certification of general mineral mine workers and miners performing specialized mineral mining tasks.
- Permitting and licensing of mineral mine sites.
- Regulatory development to establish minimum requirements for worker and public safety and operation and reclamation of mineral mine sites.
- Land reclamation through use of financial guarantees to ensure proper reclamation on permitted sites and reclamation of orphaned (abandoned) mineral mine lands.
- Economic development support through helping ensure adequate supplies of non-fuel mineral products are available to support Virginia's economic needs.

Service Area Alignment to Mission

This service area directly aligns with DMME's mission of enhancing the development of mineral resources in a safe and environmentally sound manner to support a more productive economy.

Service Area Statutory Authority

- Chapters 14.4:1 through 14.6, known as the Virginia Mineral Mine Safety Act, establish the minimum requirements for mineral mine safety in Virginia. Virginia's mineral-mine safety program is implemented independent of the federal mine safety program. However, the federal Department of Labor, Mine Safety and Health Administration recognizes Virginia's state certifications of persons completing specialized duties on coal mines such as mine foremen and mine electricians.
- Chapter 16 establishes environmental protection requirements for operation and reclamation of mineral mines in Virginia.
- Chapter 18.1 establishes requirements for construction and operation of refuse piles, and water and silt retaining dams on mineral mines in Virginia.
- Chapter 21 establishes requirements for exploration for uranium ore in Virginia. Mining of uranium ore is prohibited under Virginia law. There are currently no uranium exploration activities in Virginia.

Service Area Customer Base

Customer(s)	Served	Potential
Affiliated mineral extraction business interests	1,350	2,000
Mineral extraction operators	472	472
Mineral extraction workers	3,603	3,603
Other governmental agencies	13	150
Public affected by mineral extraction operations	24,000	24,000

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Anticipated Changes In Service Area Customer Base

Mineral extraction operations

- The tonnage of non-fuel minerals produced in Virginia historically changes in relation to the state of Virginia's economy. As the economy is strong, mineral mine production increases. As the economy is weaker, production decreases. The production of construction aggregates is also affected by the amount of highway construction and repair and amount of housing, commercial, industrial, and institutional development. However, the number of mineral mines producing these materials remains fairly stable, ranging from 450 to 500 mines from approximately 280 companies.
- Recently, the aggregate industry has grown based on residential, commercial, and institutional construction. In 2004, 106,308,288 tons of non-fuel minerals were produced from 472 mines. DMME expects that there will be a similar number of permitted mineral mines and an increase in mineral production as long as Virginia's economy remains strong and interest rates remain relatively low. Any offset in residential or commercial construction due to rising interest rates may be offset by additional funds available for transportation projects. Most of the increase in production will come from existing mines. New mineral mines are increasingly hard to open due to population growth and development over the mineral deposit locations.

Mineral extraction workers

- Mineral mine employment in Virginia changes based on the amount of tonnage produced in Virginia's mineral mines and changes in miner productivity. The number of mineral miners also is affected by the use of independent contractors on mineral mine sites. Some operators have shifted parts of operations away from their employees to contractor employees.
- Virginia had 3,603 production workers in 2004. This compares to 4,816 mineral miners working in 1989; 4,104 mineral miners working in 1994; and 4,258 mineral miners in 1999. DMME anticipates the number of mineral miners to remain relatively stable in the coming years. However, approximately one-third of mineral miners and one-half of mineral mine supervisors are replaced every five years, causing an ongoing demand for new mineral miner training and certifications.
- Mineral miner productivity to increase from 18,647 tons/miner/year in 1989 to 29,505 tons/miner/year in 2004. This has been caused by improved equipment and systems, and increasing use of independent contractors on mineral mines.

Public affected by mineral extraction operations

- Public located near mineral extraction operations may be affected by activities at the operations. These effects may include such items as ground and air vibrations from blasting; effects on groundwater quantity or quality; effects from uncontrolled release of material such as flyrock or pushed or tracked material from the site; dust from blasting, construction, or travel on soft-surfaced roads; noise; light; or truck traffic. DMME's regulations control many of these impacts. While some impacts, such as light, ambient noise, and local truck traffic, are subject to local government land use controls, DMME receives and must investigate most complaints on all of the mining effects.
- Mineral mine operators are required to notify property owners within 1,000 feet of the permit area boundary when applying for new permits. DMME used this distance to measure the number of public affected by mineral extraction operations. The applicant for a typical new mineral mine permit notifies 20 property owners. The actual number notified may range from one or two for rural operations to hundreds of property owners in more built-up areas. DMME uses an average of 20 affected property owners per mine times 2.54 average people per household times the number of mines totals to approximately 24,000 people affected.

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- DMME expects there will be additional people affected by mineral extraction operations in the coming years. Mineral mines have typically been located on the fringes of built-up areas. As suburban sprawl moves farther out from urban areas, residential and commercial development comes closer to mineral mine locations. This results in increasing numbers of persons affected by the operations.
- The increasing proximity between mineral mines and the public is expected to result in increased opposition to the locations of existing and new operations. This may cause an increased number of public interest advocacy groups to become active on mineral mine site issues.
- Public are affected by orphaned (abandoned and not reclaimed) mineral mine lands. Such lands may cause water pollution from nonpoint source runoff or acid mine drainage. Abandoned quarries or other mines may be public safety hazards from abandoned equipment, water-filled pits, unprotected highwalls, or other features. DMME does not have a count of the numbers of people affected by these orphaned mineral mine sites.

Affiliated mineral extraction business interests

- Numerous businesses support mineral extraction operations. These range from engineering firms that assist with permit preparation and facility design; to independent contractors providing non-mining services at mine sites (such as blasting, mobile equipment lubrication and maintenance, logging, overburden removal, plant construction); to independent trucking companies hauling mined material from a mine; to title attorneys and others.
- DMME expects to see an increase in the number of affiliated business interests. Mining companies are increasingly outsourcing work on mines. DMME has been given expanded responsibility for regulation of activities of independent contractors on mineral mines. DMME has registered approximately 2,000 independent mineral mining contractors in 2004. Of these, approximately 1,350 were reported as working on mineral mines during 2004. The department expects the number of independent contractor customers to continue to grow.

General public and businesses

- All Virginia residents are potentially served through DMME's mineral mining activities. All Virginians travel on Virginia roads constructed with Virginia-produced aggregates. All Virginians use public infrastructure and private facilities constructed with Virginia-produced aggregates. DMME does not track actual numbers of individual people served.
- DMME expects the general public and business customer base to increase over the next few years. As development moves into new areas, there is increasing need for geology and mineral resource information to properly plan for and support new mineral mine development. DMME also is expanding the information available across the Internet. As information is more readily available in electronic form, additional customers will become aware of its availability, thereby increasing DMME's customer base.

Other governmental agencies

- DMME provides geologic, mineral resource, and energy information to a wide variety of governmental agencies.
 - Economic development entities use mineral resource information in their business development activities. Economic development organizations contact DMME for information about the availability of specific minerals in response to companies wishing to locate operations in Virginia. Availability of construction aggregate is critical to proper planning of transportation projects. Local governments use mineral resource information as an input to local land use planning processes. Mineral mine information is used by local or

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state agencies addressing groundwater issues.

-- DMME provides information on the mineral extraction industry to other state and local agencies that have business relationships with the mineral extraction industry. These agencies look to DMME for guidance on how the extraction industry operates.

-- DMME coordinates mineral extraction regulatory activities with the similar regulatory agencies in neighboring states and in the federal government. Environmental impacts such as water pollution can cross state lines.

- In accordance with state law, DMME does not conduct regular safety inspections on mineral mines inspected by the federal Mine Safety and Health Administration (MSHA). DMME instead uses its mineral mine safety resources to provide training and technical support to enhance worker safety. Both DMME and MSHA investigate accidents that result in serious personal injuries or fatalities on mineral mines. MSHA recognizes Virginia mineral mine worker certifications. This requires coordination between DMME and MSHA.

- Virginia's mineral mining reclamation law allows localities, at their discretion, to regulate the operation and reclamation on mineral mine sites. The local programs must provide for at least the same level of regulatory coverage as DMME's mine reclamation activities. DMME periodically reviews the local programs to ensure they maintain this minimum level of regulatory coverage. Fairfax and Henrico counties exercise this authority.

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Service Area Products and Services

- Customer assistance
 - Job safety analysis, risk assessment, hazard identification, training, technical assistance, education, and cooperative projects – in such areas as mine safety, environmental protection, and land reclamation during mineral extraction.
 - Customer assistance services assist customers to maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements and use mineral production information to manage development and natural resources.
- Inspection and enforcement
 - Thorough and consistent inspection and enforcement of laws and regulations addressing worker safety on mineral extraction sites and operational and reclamation environmental controls. Assess company and individual responsibility and liability as appropriate. Investigate accidents and complaints. Note that DMME does not inspect for worker health and safety on those mineral mines inspected by the federal Mine Safety and Health Administration (MSHA). The agency does complete these inspections on those mines not inspected by MSHA. DMME does investigate accidents and complaints and complete reclamation inspections on all mine sites. Appeals to DMME's reclamation enforcement actions are taken to the Board of Surface Mining Review.
 - Inspection and enforcement services assist customers to maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements
- Certification
 - Certification of persons performing mining and other specialized tasks on mineral mine sites, such as certification of general mineral miners, mine foremen, blasters, electricians, and others. Enforcement actions against certified workers are taken by the Board of Mineral Mining Examiners.
 - Mineral extraction worker certification services assure workers performing specialized tasks necessary to maintain safe mineral extraction sites are qualified to perform these tasks
- Permitting
 - Permit and plan review and approval, financial bonding, coordination with other agencies' regulatory requirements.
 - Permitting and plan review services ensure mineral extraction operations can be conducted safely and protective of the environment (operations, land reclamation) and in compliance with mineral mining laws and regulations
- Regulatory development
 - Establishing minimum operational and reclamation requirements consistent with governing laws for mineral mining operations. DMME is the regulatory authority for mine safety and reclamation regulations. The Board of Mineral Mining Examiners promulgates regulations governing certification of mineral miners.
 - Regulatory services ensure the legal standards governing mineral mining operations will result in safe and environmentally protective operations while establishing the minimum required intrusion in permitted and licensed operations

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Service Area Products and Services

- Land reclamation
 - Reclamation of orphaned (abandoned and not reclaimed) mineral mine lands and bond forfeiture sites. Funds for the land reclamation activities come from interest earned on bonds posted by permitted mine operators in the Minerals Reclamation Fund (a pool bonding fund). DMME uses interest earned on the Minerals Reclamation Fund and grants to fund reclamation of orphaned mine land. The orphaned land program uses the Orphaned Land Advisory Committee for guidance on which orphaned lands should receive the highest priority for reclamation.
 - Land reclamation services correct damage and mitigate risks of future damage from improperly reclaimed mineral extraction lands.
- Economic development
 - Providing information on mineral availability in support of economic development.
 - Reclaimed mineral mines may be developed into new commercial, industrial, or residential sites.
 - Economic development services support efforts to increase jobs and economic activity in Virginia.

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Factors Impacting Service Area Products and Services

- Mineral mine operators will increasingly use independent contractors for a wide variety of services on mineral mines.
- Expansion of web-based electronic government capability will increase the efficiency of DMME's permitting and licensing operations.
- The mineral mining industry competes with the construction industry for workers. As the construction workforce is increasingly made up of Spanish-speaking workers, mineral mine workers will also become increasingly Spanish speaking.
- Permitting of new mineral extraction sites will become more difficult as expanding areas of residential and commercial development reach areas where mineral mines are located.
- Past reductions in DMME's budgets have caused the agency to increasingly rely on permit and license revenue. DMME will spend down fund balances from these sources in the coming year.
- DMME will need to replace a significant proportion of its workforce in the near future. This will eliminate a significant amount of the institutional knowledge that helps DMME understand and face the challenges of providing high quality customer service. DMME will be faced with increasing difficulty in finding these high quality workers at state salary rates as mining and other energy industries have substantially increased the amount they pay employees to combat their labor shortages.

Anticipated Changes To Service Area Products and Services

- The demand for DMME's customer services is anticipated to increase as the mineral extraction industry faces continuing business challenges.
- More DMME permitting and reporting activities will be shifted to electronic government systems as web-based tools are implemented.
- DMME training and certification services are anticipated to increase as the construction industry competes with the mineral mining industry for workers, causing a substantial turnover in mineral mine workers. These services will need to be adapted to account for increasing numbers of workers with Spanish as their primary language.
- Increased use of contractors on mineral mine sites also will increase the demand for training and assistance services.
- Increasing conflict between mineral mines and expanding areas of residential and commercial development will increase the likelihood of challenges to permitting decisions. This will increase use of formal litigated-issues hearings and court challenges.
- DMME anticipates losing more employees to mine operators as these companies increase their salaries to respond to their labor shortages. We will also be faced with increasing difficulty attracting the same level of experienced employees at current state salaries.
- Spending down of permit fee fund balances in the coming year will cause DMME to have to either reduce services or find additional funding in the new biennium.

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Service Area Financial Summary

The mineral mining service area's funding comes from general funds (45%), permit and license fees paid by mineral mine operators (35%), federal mine safety and mine reclamation grant funds (9%), bond forfeiture proceeds (8%), and orphaned land fund proceeds (6%).

	<u>Fiscal Year 2007</u>		<u>Fiscal Year 2008</u>	
	<u>General Fund</u>	<u>Nongeneral Fund</u>	<u>General Fund</u>	<u>Nongeneral Fund</u>
Base Budget	\$963,635	\$1,170,000	\$963,635	\$1,170,000
Changes To Base	\$338,295	\$20,000	\$344,942	\$20,000
SERVICE AREA TOTAL	\$1,301,930	\$1,190,000	\$1,308,577	\$1,190,000

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Service Area Objectives, Measures, and Strategies

Objective 50602.01

To eliminate injuries and fatalities at mineral mine sites.

Protection of worker and public safety from the dangers on mineral mine sites is of critical importance to ensure the safety of Virginians working on or living near mineral mine sites. Dangers may be present due to improper conditions or improper actions by miners. The DMME Division of Mineral Mining provides customer assistance and inspection and enforcement of mine safety based on a risk assessment of mines, with the riskiest mines receiving a higher level of services.

This Objective Supports the Following Agency Goals:

- Provide for safe and environmentally sound mineral and fossil fuel extraction.

(This objective is consistent with DMME's mission of enhancing the development of mineral resources in a safe manner. The mineral mine safety program is mandated in Chapters 14.4:1 through 14.6 of Title 45.1 of the Code of Virginia, known as the Virginia Mineral Mine Safety Act. This act establishes the minimum requirements for mineral mine safety in Virginia. Safety around impoundments on mineral mines is mandated in Chapter 18.1 of Title 45.1 of the Code of Virginia. This objective aligns with DMME's strategic direction under goal 1, "Provide for safe and environmentally sound mineral and fossil fuel extraction", and with the long-term objectives of Virginia to protect the public's safety and to protect, conserve, and wisely develop our natural resources.)

This Objective Has The Following Measure(s):

- **Measure 50602.01.01**

Serious personal injury-fatality rate on mineral mine sites.

Measure Type: Outcome **Measure Frequency:** Annually

Measure Baseline: 0.14 (avg. CY 2000 - CY 2004)

Measure Target: <0.14 (avg. CY 2002 - CY 2006)

Measure Source and Calculation:

Data is collected from reports of serious personal injuries and fatalities submitted by permitted mineral mine operators throughout the year and the reports of employee work hours reported by permitted mineral mine operators on their annual tonnage reports submitted to DMME. The rate is calculated as the number of serious personal injuries and fatalities per 200,000 work hours. DMME evaluates the five-year rolling average of this rate to determine the trend.

- **Measure 50602.01.02**

Percentage of safety violations successfully eliminated by the violations' due dates.

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 91.7% (avg. FY 2003 - FY 2005)

Measure Target: >=95% (FY 2007 - FY 2008)

Measure Source and Calculation:

This measure is calculated using information from DMME's automated enforcement systems. Records of violations show date issued, target date for correcting the violation, and date the violation is corrected. The percentage is calculated based on total number of safety violations corrected by their due dates and of total safety violations issued.

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Objective 50602.01 Has the Following Strategies:

- The DMME Division of Mineral Mining will provide customer assistance and conduct thorough and consistent inspections to achieve compliance with mine safety laws and regulations.
- The DMME Division of Mineral Mining will use the risk assessment process to identify unsafe mining practices and conditions at mine sites. These assessments will be used to provide site-specific risk inspections and assistance that address risk factors in order to enhance mine safety.
- The DMME Division of Mineral Mining (DMM) will develop and provide site-specific educational services and products targeted to eliminate accidents, injuries, fatalities, and adverse health effects. DMM will work with DMME Divisions of Mines and Gas and Oil, the federal Mine Safety and Health Administration (MSHA), and other providers to improve quality and accessibility of training services provided to miners by:
 - Using accident data and risk assessment analysis to develop training materials.
 - Improving web access to materials for trainers.
 - Updating and improving training aids and evaluating and classifying existing training videos.
 - The DMM Education and Training team will meet quarterly to address training issues.
- The DMME Division of Mineral Mining (DMM) will provide certification and related training programs and services that ensure required competency and improve safe mining practices. In particular, DMM will:
 - Update certification course training materials to reflect changes to laws and regulations, and updated accident statistics and trends.
 - Continue to develop the certification exam data banks and implement the electronic testing and grading system.
- The DMME Division of Mineral Mining (DMM) will investigate accidents and resolve safety and health complaints associated with mineral mine sites. DMM will provide timely and complete reporting, timely dissemination of information, and take actions to prevent future occurrences of unsafe practices and conditions.
- The DMME Division of Mineral Mining will collaborate with other DMME divisions on safety issues involving mining and gas well activities to include:
 - Developing comprehensive automated mapping of all DMME mine, gas well, and geologic data.
 - Communicating on issues of mutual concern related to mining and gas well activities.
- The DMME Division of Mineral Mining will minimize duplication of inspection activities through communications and coordinated inspections and investigations with other state and federal agencies.

Objective 50602.02

To eliminate adverse environmental conditions and public safety hazards at mineral mine sites.

Protection of the public safety and the environment from the off-site effects of activities on mineral mine sites is of critical importance, including protecting against harm to people near the mines from such items as blasting, discharge of materials, and protecting against the deleterious effects mining may have on the environment. The DMME Division of Mineral Mining provides customer assistance, hazard identification, and inspection and enforcement of mine reclamation to meet this objective.

This Objective Supports the Following Agency Goals:

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- Provide for safe and environmentally sound mineral and fossil fuel extraction.
(This objective is consistent with DMME's mission of enhancing the development of mineral resources in an environmentally sound manner. The mineral mine reclamation program is mandated in Chapter 16 of Title 45.1 of the Code of Virginia. The uranium exploration regulatory program is mandated in Chapter 21 of Title 45.1 of the Code of Virginia. This objective aligns with DMME's strategic direction under goal 2, "Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources", and with the long-term objectives of Virginia to protect, conserve, and wisely develop our natural resources and to protect the public safety.)

This Objective Has The Following Measure(s):

- **Measure 50602.02.01**

Percentage of mineral mine sites with no adverse off-site environmental damage or public safety hazard

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 98.4% (avg. FY 2003 - FY 2005)

Measure Target: >=95% (avg. FY 2005 - FY 2007)

Measure Source and Calculation:

This measure is calculated using information from DMME's mineral mining automated enforcement system. Records of violations show whether there was any off-site damage or public safety hazard related to a violation of environmental laws or regulations. The number of sites with no violations causing off-site impacts is calculated as a percentage of permitted sites. The percentages for the most recent three years are then averaged.

- **Measure 50602.02.02**

Percentage of environmental violations successfully eliminated by the violations' due dates.

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 81.4% (avg. FY 2003 - FY 2005)

Measure Target: >= 80% (FY 2007 - FY 2008)

Measure Source and Calculation:

This measure is calculated using information from DMME's mineral mining automated mineral mining enforcement system. Records of violations show date issued, target date for eliminating the violation, and date the violation is eliminated. The total number of environmental violations eliminated by their due date is calculated as a percentage of total environmental violations issued.

Objective 50602.02 Has the Following Strategies:

- The DMME Division of Mineral Mining will provide assistance and inspections to ensure compliance with laws and regulations, identify potential hazards, and eliminate existing adverse environmental conditions and public safety hazards. Mine inspectors will provide assistance and inspections in a manner that is most efficient for the customer, including coordination among DMME divisions and other local, state, and federal agencies.
- The DMME Division of Mineral Mining will identify potential hazards that could impact environmental conditions or public safety and ensure increased public protection through regulatory requirements, inspections, and assistance.
- The DMME Division of Mineral Mining will investigate and effectively resolve environmental complaints, concerns, and public safety hazards, with assistance from all DMME divisions where appropriate, and provide timely and complete reporting to concerned, involved parties.

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- The DMME Division of Mineral Mining will develop a complaint risk assessment to identify public concerns. The division will use the assessment results to identify high and low risk activities and operators, identify model practices for communicating with the public, and share information on successful practices with operators.
- The DMME Division of Mineral Mining will provide a timely and complete review of mine permit applications and amendments consistent with laws and regulations.
- The DMME Division of Mineral Mining will work with all DMME divisions to provide technical assistance to customers and stakeholders, and work with them to proactively seek joint resolutions of significant and emerging issues.
- The DMME Division of Mineral Mining will develop and provide educational services and products designed and targeted to identify potential, and eliminate existing, adverse environmental conditions.
- The DMME Division of Mineral Mining (DMM) will assess all potential bond forfeiture sites and take actions to prevent bond forfeitures using customer and stakeholder involvement. DMM will maintain a bond forfeiture inventory.
- The DMME Division of Mineral Mining will monitor and evaluate waiver programs to ensure consistency with laws and regulations.

Objective 50602.03

To eliminate environmental and public safety hazards associated with orphaned mineral mines and bond forfeiture sites.

Orphaned (abandoned and not reclaimed) mineral mine lands and permitted mine sites not properly reclaimed by the permit holder may cause water pollution from nonpoint source runoff or acid mine drainage. Abandoned mineral mines may cause public safety hazards from abandoned equipment, water-filled pits, unprotected highwalls, or other features. This objective directs DMME's work to reclaim the highest priority orphaned mineral mine sites.

This Objective Supports the Following Agency Goals:

- Provide for safe and environmentally sound mineral and fossil fuel extraction.
(This objective is consistent with DMME's mission of enhancing the development of mineral resources in an environmentally sound manner. Reclamation of orphaned and bond forfeiture mineral mines are mandated in Chapter 16 of Title 45.1 of the Code of Virginia. The uranium exploration regulatory program is mandated in Chapter 21 of Title 45.1 of the Code of Virginia. This objective aligns with DMME's strategic direction under goal 2, "Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources", and with the long-term objectives of Virginia to protect, conserve, and wisely develop our natural resources and to protect the public safety.)

This Objective Has The Following Measure(s):

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- **Measure 50602.03.01**

Percentage of orphaned mineral mine sites assessed with data entered into the orphaned mineral mine i

Measure Type: Output **Measure Frequency:** Annually

Measure Baseline: 52.4% (FY 2005)

Measure Target: >52.4% (FY 2007 - FY 2008; subject to available funding).

Measure Source and Calculation:

DMME has estimated that there are 3,000 orphaned mineral mine sites based on historical records of mineral mining activity in the state. The total number of inventoried mineral mine sites is taken from the orphaned mined land information system. The percentage is calculated from these data.

- **Measure 50602.03.02**

Percentage of orphaned mineral mine sites on which safety and health hazards have been eliminated.

Measure Type: Output **Measure Frequency:** Annually

Measure Baseline: 2.8% (FY 2005)

Measure Target: >2.8% (FY 2007 - FY 2008; subject to available funding).

Measure Source and Calculation:

DMME has estimated that there are 3,000 orphaned mineral mine sites based on historical records of mineral mining activity in the state. The total number of reclaimed mineral mine sites is tracked by DMME staff after the final inspection of the reclamation work is completed. The percentage is calculated from these data.

Objective 50602.03 Has the Following Strategies:

- The DMME Division of Mineral Mining, with the involvement of customers and stakeholders, will reclaim watershed restoration orphaned sites, bond forfeiture sites, and the highest priority orphaned mineral mine sites by using all available funds and resources.
- The DMME Division of Mineral Mining will administer the nonpoint source (NPS) pollution control program for orphaned mineral mines and apply for additional funding to continue the NPS coordinator position.
- The DMME Division of Mineral Mining will increase the watershed inventory of orphaned mineral mines and forfeited sites by pursuing methods, such as:
 - Integrating the orphaned land inventory with the Mineral Resources of Virginia's project of the Division of Mineral Resources.
 - Cooperating with schools and universities, gem and mineralogical societies, county geographic information systems (GIS), and the Mine Safety and Health Administration/Office of Surface Mining Stay Out-Stay Alive program.
 - External/internal funding.
 - Partnerships.
 - Leveraging.
 - Cooperating with other state and federal projects.The inventory, which includes existing or potential wetlands, carbon sequestration potential, and economic development site information for orphaned/forfeited mineral mines will be provided to all DMME divisions.

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- The DMME Division of Mineral Mining will, in coordination with the DMME grant coordinator, pursue innovative methods, such as external funding, partnerships, leverage, and cooperation with other state and federal projects, to advance the elimination of adverse environmental and public health and safety hazards on orphaned and bond forfeited mineral mine sites.

Objective 50602.04

To improve our customers' ability to establish and maintain efficient, viable operations.

DMME helps regulated entities establish and maintain economically viable operations that will be both profitable and operate safely and respectfully of the environment. DMME works with its customers to implement process improvements to increase efficiency of interaction with DMME and provide mineral information needed for economic development.

This Objective Supports the Following Agency Goals:

- Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources.
(This objective is consistent with DMME's mission of enhancing the development of mineral resources to support a more productive economy. This objective aligns with DMME's strategic direction under goal 2, "Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources", and with the long-term objectives of Virginia to protect, conserve, and wisely develop our natural resources and to be a national leader in the preservation and enhancement of our economy.)

This Objective Has The Following Measure(s):

- **Measure 50602.04.01**

Percentage of timely decisions on new mineral mine permit applications.

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 77.2% (avg. FY 2001 - FY 2005)

Measure Target: >=95% (avg. FY 2004 - FY 2008)

Measure Source and Calculation:

This measure is calculated using permit-tracking data from DMME's mineral mining database system. The number of permit decisions made within the time deadlines for the mineral mining permitting program (60 days of in-house time) is compared to total permit decisions due during the review period. These numbers are used to calculate the percentage of timely permit decisions. The percentage for the most recent five years is then averaged to generate the measure.

- **Measure 50602.04.02**

Percentage of customer forms submitted electronically.

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 30% (FY 2005)

Measure Target: 75% (FY 2008)

Measure Source and Calculation:

The DMME Division of Mineral Mining counts the number of forms submitted from activity logs. The measure is calculated as a percentage of forms submitted electronically as compared to the estimate of the total number of forms submitted to the division.

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Objective 50602.04 Has the Following Strategies:

- The DMME Division of Mineral Mining will provide effective, timely, and useful assistance to customers and will involve them in identifying areas for improvement.
- The DMME Division of Mineral Mining will involve its customers and stakeholders in continually identifying, developing, and implementing process improvements to include e-government, regulatory guidance, electronic information/ data distributions, and technical assistance. The division will enlist customers to expand electronic forms use by offering training, assistance, and incentives.
- The DMME Division of Mineral Mining will collaborate with state, regional, and local economic development organizations to provide information on the mineral mining infrastructure useful for business development.
- The DMME Division of Mineral Mining will expand contacts with state and federal agencies and customers to explore opportunities for:
 - Coordination of shared regulatory authority.
 - Coordination of available resources.
 - Review of current and anticipated issues and impacts to agencies and customers.

Objective 50602.05

To improve our customers' and stakeholders' capability to make informed decisions regarding the development and use of rock, mineral, land, water, and energy resources.

DMME provides its customers with information to help them have the knowledge needed to make decisions about their operations. This can take the form of providing information on mineral development opportunities, help permitted mine operators and economic development organizations develop mined land for beneficial land uses, and respond to emerging issues that may affect their operations.

This Objective Supports the Following Agency Goals:

- Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources.

(This objective is consistent with DMME's mission of enhancing the development of mineral resources to support a more productive economy. This objective aligns with DMME's strategic direction under goal 2, "Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources", and with the long-term objectives of Virginia to protect, conserve, and wisely develop our natural resources and to be a national leader in the preservation and enhancement of our economy.)

This Objective Has The Following Measure(s):

- **Measure 50602.05.01**

Percentage of customers satisfied with DMME Division of Mineral Mining services.

Measure Type: Outcome **Measure Frequency:** Every Six Months

Measure Baseline: 95.2% (avg. FY 2003 - FY 2005)

Measure Target: >=90% (FY 2007 - FY 2008)

Measure Source and Calculation:

Data is derived from DMME Division of Mineral Mining's customer surveys addressing satisfaction with DMME's services in providing information, permitting, and field inspections. The number of customers expressing satisfaction or higher is counted as a percentage of total questionnaires received from customers.

Service Area Plan

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Objective 50602.05 Has the Following Strategies:

- The DMME Division of Mineral Mining will provide customers and stakeholders with information regarding rock, mineral, land, water resources, and energy technologies associated with mineral mining by:
 - Identifying their needs and delivery methods.
 - Providing rock and mineral resources information from the DMME Division of Mineral Resources, and energy conservation and use information from the DMME Division of Energy.
 - Developing products to meet their needs.
 - Expanding the number of products that are electronically available.
 - Inform local officials of DMME's capabilities and services.
- The DMME Division of Mineral Mining (DMM) will assist customers and partner with stakeholders to develop mined land for economic development and other beneficial land use, such as:
 - Industrial Parks.
 - Commercial development sites.
 - Highway construction.
 - Utility construction.
 - Coal to liquid.
 - Agricultural, biomass, or waste-to-energy.DMM will work with other divisions to compile and provide information that will be useful to stakeholders in developing mined land.
- The DMME Division of Mineral Mining (DMM) will identify public information needs, opportunities, and delivery methods, emphasizing the division's role, services, and products.
- The DMME Division of Mineral Mining (DMM) will assist the DMME Division of Energy with the Virginia Energy Plan.
- The DMME Division of Mineral Mining will identify emerging issues, such as Total Maximum Daily Load (TMDL) implementation, watershed restoration, offshore mineral location, and solution mining, and work with its customers and stakeholders to address potential impacts.